Management guidelines for dermatologic adverse events (dAEs)

A healthcare provider’s guide to help prevent, identify, and manage dAEs for patients using Optune® to help maximize time on therapy

Inform patients to contact their provider as soon as they experience itching or redness

This brochure does not represent medical advice, but guidance based on clinical trial results. Novocure® cannot give medical advice.

Patient images reflect the health status of the patients at the time the photo was taken.
Help prevent dAEs to maximize time on therapy

The most common adverse event associated with Optune® in clinical trials was skin irritation beneath the transducer arrays.¹ For this reason, it is important to monitor not only the patient’s clinical status but also his or her scalp health.

Tips to minimize skin irritation¹:

- Change transducer arrays at least twice a week (every 4 days at most)
- Shift transducer arrays during routine exchanges according to transducer array layout map
  - Place new array 0.75 inches away from the last place it was on the skin to avoid irritation
- Advise patient to remove arrays gently by pulling back on the edge of the array, taking a minute to remove each array
- Avoid placing ceramic discs directly over screws, plates, or scars
- Instruct patient to notify provider of erythema or irritation
- Ensure proper ventilation of transducer arrays

Recommend ventilated, protective wigs or hats in hot weather.¹
Visit Optunedailylife.com for a list of head coverings

Please see Optune Instructions For Use (IFU) for complete information regarding the device’s indications, contraindications, warnings, and precautions at Optune.com/Safety.
Additional steps that may reduce the risk of dAEs

Tips to prevent skin irritation and potential infection

Always wash your hands prior to application and removal of transducer arrays

Wash your scalp between transducer array exchanges

Clean the electric razor per manufacturer’s guidelines after every shave

Proper transducer array placement and shifting of arrays helps reduce the risk of skin irritation
## Identifying key risk factors

<table>
<thead>
<tr>
<th>Key risk factors correlated with dAEs¹:</th>
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<tbody>
<tr>
<td>✓ High doses or recent change in systemic corticosteroids</td>
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<td>✓ Concurrent administration of chemotherapy, biologics, or targeted therapies</td>
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<td>✓ Previous skin exposure to ultraviolet or ionizing radiation</td>
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<td>✓ History of contact dermatitis (eg, from tape adhesive or hydrogel)</td>
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<tr>
<td>✓ Excessive sweating from hot, humid weather or occlusive wigs</td>
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<tr>
<td>✓ Placement of transducer arrays (ie, ceramic discs) overlying scars or craniotomy hardware</td>
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Identify the types of dAEs patients may experience

Identification of patient risk factors, proper and timely array changes, and patient and caregiver education are all important for reducing the risk of developing skin irritation while on Optune.¹

In a phase 3 clinical trial (EF-14), the rate of grade 1 to 2 medical device site reactions was 52%, and the rate of grade 3 medical device site reactions was 2%.²

Most dAEs are typically mild to moderate and can be prevented or managed with skin care treatment without discontinuing Optune.¹

Dermatologic adverse events¹

- Can potentially be prevented
- Identify patient risk factors
- Educate on proactive and proper scalp care
- Are typically mild to moderate in nature
- Are generally managed with topical therapy without resulting in treatment discontinuation
## Causes and management of common dAEs

Treatment options for dAEs are dependent upon the type and severity of the dAE.¹

<table>
<thead>
<tr>
<th>Adverse Events</th>
<th>Description</th>
<th>Potential Cause(s)</th>
<th>Treatment for mild dAEs</th>
<th>Treatment for moderate-to-severe dAEs or if reaction does not improve</th>
</tr>
</thead>
</table>
| **Dermatitis¹** | Skin inflammation, presenting with edema or erythema, followed by scaling | Allergic reaction (tape adhesive/hydrogel), chemical irritation (hydrogel, moisture, alcohol) | • High-potency topical corticosteroid ointments (clobetasol 0.05%, betamethasone 0.05%) | • High potency topical corticosteroid ointments  
• Short treatment break; consider dermatology consult |
| **Erosions¹,³** | Moist, circumscribed, depressed lesions from loss of viable epidermis—mild bleeding, pain, and burning are possible | Trauma related to repeated shaving and/or array pressure/removal | • Topical antibiotics (eg, mupirocin or polymyxin B/bacitracin ointments) | • Topical and oral antibiotics  
• Short treatment break; consider dermatology consult |
| **Folliculitis¹,⁴** | Inflammation of hair follicle, presents as red pimple with hair in the center—may have pus, itching, or burning | Bacterial infection | • Topical antibiotic ointment | • Oral antibiotics  
• Warm compresses with salt water or Burow’s solution  
• Consider medicated shampoo |

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**Advise patients to avoid putting ceramic discs or adhesive tape over areas affected by a dAE when placing or exchanging arrays**

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| **Infection\(^1\)** | Pustules (raised epidermal lesions containing pus), possibly friction vesicles (bullae) with clear content or “bullous impetigo” with yellow-greenish content | Secondary bacterial infection | • Culture and treat with appropriate topical antibiotics | • Culture and treat with appropriate oral antibiotics AND avoidance of direct contact of discs/adhesive tape with affected area(s)  
• Obtain skin culture; oral antibiotics; consider short treatment break; consider dermatology consult |
| **Ulcers\(^1\)** | Round lesions with well-defined borders, in which the epidermis and the dermis have been destroyed | Decreased perfusion from array pressure | • Open areas require topical antibiotics  
• Depending on depth, may require referral to dermatologist | • Topical and oral antibiotics AND avoidance of direct contact of discs/adhesive tape with affected area(s)  
• Short treatment break; consider dermatology consult |

Skin irritations seen as a result of treatment with Optune® can usually be managed with proper skin care and the use of medications, such as topical corticosteroids and antibiotics, without discontinuing therapy.
Instructions for application of topical therapy

Patient instructions on how to properly apply topical medications:

✓ Remove transducer arrays and clean scalp
✓ Apply topical agent (eg, steroid or antibiotic) to affected area(s)
  — Have patients only apply topical agents when they exchange transducer arrays (1-2 times per week)
  — Leave ointment on for approximately 15-30 minutes
✓ Wipe off remaining topical agent per instructions of prescription
✓ Clean scalp with medical (70%) alcohol
✓ Apply new transducer arrays to a dry scalp, ensuring that arrays are shifted “back and forth” approximately 0.75 inches at each exchange and are not placed over palpable screws or plates

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Communication with the patient is key to prevention and management of skin irritation

Please refer to the brochure for patients, entitled *A guide to scalp care and proper transducer array placement* (available in both English and Spanish), as an educational tool to use with your patients and their caregivers.

Contact a Novocure representative or go to Optune.com for additional resources including available styles for head coverings.

Note that neither a Device Support Specialist (DSS) nor a Care Coordinator (CC) at nCompass™ can manage skin irritation
Indications For Use

Optune is intended as a treatment for adult patients (22 years of age or older) with histologically-confirmed glioblastoma multiforme (GBM).

Optune with temozolomide is indicated for the treatment of adult patients with newly diagnosed, supratentorial glioblastoma following maximal debulking surgery, and completion of radiation therapy together with concomitant standard of care chemotherapy.

For the treatment of recurrent GBM, Optune is indicated following histologically- or radiologically-confirmed recurrence in the supratentorial region of the brain after receiving chemotherapy. The device is intended to be used as a monotherapy, and is intended as an alternative to standard medical therapy for GBM after surgical and radiation options have been exhausted.

Important Safety Information

Contraindications

Do not use Optune in patients with an active implanted medical device, a skull defect (such as, missing bone with no replacement), or bullet fragments. Use of Optune together with implanted electronic devices has not been tested and may theoretically lead to malfunctioning of the implanted device. Use of Optune together with skull defects or bullet fragments has not been tested and may possibly lead to tissue damage or render Optune ineffective.

Do not use Optune in patients that are known to be sensitive to conductive hydrogels. In this case, skin contact with the gel used with Optune may commonly cause increased redness and itching, and rarely may even lead to severe allergic reactions such as shock and respiratory failure.
Warnings and Precautions

Optune can only be prescribed by a healthcare provider that has completed the required certification training provided by Novocure® (the device manufacturer).

Do not prescribe Optune for patients that are pregnant, you think might be pregnant or are trying to get pregnant, as the safety and effectiveness of Optune in these populations have not been established.

The most common (≥10%) adverse events involving Optune in combination with temozolomide were thrombocytopenia, nausea, constipation, vomiting, fatigue, medical device site reaction, headache, convulsions, and depression.

The most common (≥10%) adverse events seen with Optune monotherapy were medical device site reaction and headache.

The following adverse reactions were considered related to Optune when used as monotherapy: medical device site reaction, headache, malaise, muscle twitching, fall and skin ulcer.

Use of Optune in patients with an inactive implanted medical device in the brain has not been studied for safety and effectiveness, and use of Optune in these patients could lead to tissue damage or lower the chance of Optune being effective.

If the patient has an underlying serious skin condition on the scalp, evaluate whether this may prevent or temporarily interfere with Optune treatment.

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Additional support and resources for your patient

The Buddy Program—Connects patients, and/or their caregivers, who have recently started or are considering treatment with Optune® with an ambassador. The ambassador is a patient or caregiver who has experience with Optune and can share how he or she has learned to incorporate Optune into his or her daily life. Call toll free at 1-844-247-1636 for the Buddy Program.

The nCompass™ brochure—Provides detailed information on the 24/7 support patients and caregivers can expect with Optune at every step of the way. Call toll free at 1-855-281-9301.

Optune.com—This online resource gives patients a wealth of information about Optune, including where to find a certified treatment center. Here they can also view a range of videos and download resources.

Optune Facebook page—The Optune US Facebook page provides information such as useful tips, answers to frequently asked questions, and information on upcoming events in the glioblastoma (GBM) community.

Optune YouTube Channel—Helpful videos present Optune users and their doctors as they discuss GBM, Optune, how it is applied and used, and how it allows for usual daily activities.

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